



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-694-3200

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Commissioner

Date Stamped May 22, 2013

Mr. Eric R. Muller  
Aggregate Industries – Northeast Region, Inc.  
55 Russell Street  
Peabody, Massachusetts 01960

**RE: PEABODY**  
Transmittal No.: X254125  
Application No.: *NE-13-004*  
Class: *SM50*  
FMF No.: *131122*  
**AIR QUALITY PLAN  
APPROVAL**

Dear Mr. Muller:

The Massachusetts Department of Environmental Protection (“MassDEP”), Bureau of Waste Prevention, has reviewed your Limited Plan Application (“Application”) listed above. This Application concerns the installation and operation of a portable electric nonmetallic mineral processing (crushing) plant at your existing facility located at 55 Russell Street in Peabody, Massachusetts (“Facility”). On May 13, 2013, MassDEP received supplemental information from Aggregate Industries – Northeast Region, Inc. on this Application.

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 “Air Pollution Control,” regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-J, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP’s review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner / operator (“Permittee”) must comply in order for the Facility to be operated in compliance with this Plan Approval.

## **1. DESCRIPTION OF FACILITY AND APPLICATION**

Aggregate Industries – Northeast Region, Inc. (the “Permittee”) owns and operates a stone quarry and hot mix asphalt operation located at its Peabody, Massachusetts Facility. The Permittee has been processing crushed stone, gravel and sand of various sizes and quantities for over 30 years at the site. Under previous MassDEP Approvals (Transmittal No. 126834 dated June 10, 1997, and Transmittal No. 137761 dated April 16, 1998), the Permittee had installed and had operated a portable electric crushing plant at the site that was decommissioned on December 31, 2010. As such, these previous Plan Approvals for prior rock crushing operations at this Facility are terminated (See Special Condition 15). Since that time, the Permittee has been bringing a portable crushing plant onsite during each quarry operating season and operating the plant in compliance with 310 CMR 7.02(2)(b)7 De Minimis Increase in Emissions.

The Permittee proposes to install and operate a new portable electric nonmetallic mineral processing (crushing) plant capable of handling 1,500 tons per hour (tph) of rock that will generate coarse and fine particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) emissions. This new plant will be the only rock crushing plant at the Facility and will only utilize electrical power purchased from a utility. The portable crushing plant (EU-CRUSH) will operate approximately 40 weeks per year, typically from April to December. EU-CRUSH may operate from Monday through Friday, 7:00 am to 5:00 pm.

EU-CRUSH will include, at most, a Simplicity Vibrating Grizzly Feeder (VGF) 51 inches (”) by (x) 21 feet (’) or equivalent, a primary crusher (Nordberg C145 Jaw Crusher or equivalent), a secondary crusher (Nordberg HP500 S/C or equivalent), two tertiary crushers (Nordberg HP500 Crushers or equivalent); three 8’ x 24’ Double Deck Diester Screens or equivalent; one 8’ x 24’ Triple Deck Diester Screen or equivalent and up to 21 conveyors of various lengths and widths.

A comprehensive water spray dust suppression system will be installed on EU-CRUSH to minimize particulate emissions from the rock crushing operation. This dust suppression system will consist of two water spray systems to be installed at the primary, secondary, and tertiary crushers. Each system will be a DustPro Model 404 water spray system or equivalent with BETE high impact fan sprays or equivalent. The spray nozzles will include high impact fan sprays and cone shaped sprays.

Fugitive particulate emissions from roadway dust and noise emissions will be minimized via Best Management Practices (BMPs) found in Special Permit #33 issued to the Permittee by the city of Peabody on October 30, 2002 and this Plan Approval.

MassDEP also determined that you demonstrated, through USEPA-approved air quality modeling, that the projected emissions from the proposed facility including fugitive emissions from the rock crushing operation and the roadways as well as the existing hot mix asphalt plant will not cause or contribute to an exceedance of the National Ambient Air Quality Standards (NAAQs) for PM<sub>10</sub> and PM<sub>2.5</sub>.

## 2. EMISSION UNIT (EU) IDENTIFICATION

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1			
EU#	DESCRIPTION OF EMISSION UNIT	EU DESIGN CAPACITY	POLLUTION CONTROL DEVICE (PCD)
EU-CRUSH	Portable Rock Crushing Plant: <ul style="list-style-type: none"> <li>• Simplicity Vibrating Grizzly Feeder 51" x 21' or equivalent</li> <li>• Primary Crusher – Nordberg C145 Jaw Crusher or equivalent</li> <li>• Secondary Crusher – Nordberg HP500 S/C or equivalent</li> <li>• Two Tertiary Crushers – Nordberg HP500 Crusher or equivalent</li> <li>• Three 8' x 24' Double Deck Diester Screens or equivalent</li> <li>• One 8' x 24' Triple Deck Diester Screen or equivalent</li> <li>• Up to 21 conveyors of various lengths and widths</li> </ul>	<ul style="list-style-type: none"> <li>• Max. Raw Material Production Rate: 1,500 tons per hour</li> </ul>	Wet Dust Suppression System

**Table 1 Key:**

EU# = Emission Unit Number

' = feet

" = inches

### 3. APPLICABLE REQUIREMENTS

#### A. OPERATIONAL, PRODUCTION AND EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2 below:

Table 2						
EU#	RESTRICTIONS/ OPERATING PARAMETERS	POLLUTANT	EMISSION LIMIT/STANDARD			APPLICABLE REGULATION AND/OR APPROVAL NUMBER
			Emission Rate	Tons per month	Tons per 12 month rolling period	
EU- CRUSH	<ul style="list-style-type: none"> <li>Operating Hours: Monday – Friday, 7:00 am – 5:00 pm<sup>1</sup> only</li> <li>Maximum raw material production rate: 1,500 tons per hour</li> <li>Mineral processing not to exceed 427,000 tons per month</li> <li>Mineral processing not to exceed 3,795,000 tons per rolling 12 month period</li> <li>Operate using line power only</li> <li>Operate crushers in accordance with all other applicable regulations or requirements</li> <li>Employ wet dust suppression system as necessary, in accordance with Best Management Practices</li> </ul>	PM <sub>10</sub>	EPA-AP-42 Emission Factors	1.00	8.85	NE-13-004
		PM <sub>2.5</sub>		0.14	1.23	
		Visible Emissions (Opacity from fugitive particulate emissions)	Primary and Secondary Crushing: Opacity ≤ 10%			310 CMR 7.03(26)(c)4
			Tertiary Crushing: Opacity ≤ 7% Screening and Conveyor/transfer: Opacity ≤ 7%			40 CFR Part 60, Subpart OOO

**Table 2 Key:**

EU# = Emission Unit Number

PM<sub>10</sub> = particulate matter no larger than 10 microns in diameter

PM<sub>2.5</sub> = particulate matter no larger than 2.5 microns in diameter

≤ = less than or equal to

<sup>1</sup> = from 4:00 pm – 5:00 pm no deliveries of product from the Facility shall occur

EPA-AP-42 = Compilation of Air Pollutant Emission Factors

40 CFR Part 60, Subpart OOO = Standards of Performance for Nonmetallic Mineral Processing Plants

## B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5 below:

<b>Table 3</b>	
<b>EU#</b>	<b>Monitoring and Testing Requirements</b>
EU-CRUSH	1. Monitor actual operating hours of the nonmetallic mineral processing plant.
	2. Monitor maximum hourly raw material production rates to document compliance status with the allowed maximum hourly production rate contained in Table 2 above.
	3. Monitor material processed on a monthly basis and a rolling 12-month basis to document compliance status with the maximum monthly and rolling 12-month processing rates contained in Table 2 above.
	4. Monitor material processed on a monthly basis and a rolling 12-month basis that will be used to determine the actual PM <sub>10</sub> and PM <sub>2.5</sub> emission rates from the nonmetallic mineral processing plant.
	5. Visually inspect each wet dust suppression system during daily startup of the nonmetallic mineral processing plant.
	6. Perform Emissions Compliance Demonstration in compliance with the Federal New Source Performance Standards (NSPS) for new stationary or portable sources for nonmetallic mineral processing plants, 40 CFR Part 60, Subpart OOO. This testing must be performed within 60 days after achieving the maximum production rate, but no later than within 180 days of new equipment startup. Although MassDEP has not accepted delegation of 40 CFR Part 60, Subpart OOO, the Permittee is responsible for complying with this federal regulation.
	7. Perform all monitoring and testing requirements as specified in 40 CFR Part 60, Subpart OOO.
Facility-wide	8. Perform Emissions Compliance Testing (Stack Testing), in accordance with 310 CMR 7.13, and 40 CFR Part 60, appendix A or any other testing if and when requested by MassDEP or USEPA.

**Table 3 Key:**

EU# = Emission Unit Number

MassDEP = Massachusetts Department of Environmental Protection

USEPA = United States Environmental Protection Agency

Table 4	
EU#	Record Keeping Requirements
EU- CRUSH	1. Record each date of operation, including the daily start-up and shut down times of the nonmetallic mineral processing plant.
	2. Record maximum hourly raw material production rates to document to document compliance status with the allowed maximum hourly production rate contained in Table 2 above.
	3. Record material processed on a monthly basis and a rolling 12-month basis to document compliance status with the maximum monthly and rolling 12-month processing rates contained in Table 2 above.
	4. The Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve month period (current month plus prior eleven months). These records shall be compiled no later than the 15 <sup>th</sup> day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at <a href="http://www.mass.gov/dep/air/approvals/aqforms.htm#report">http://www.mass.gov/dep/air/approvals/aqforms.htm#report</a> .
	5. The Permittee shall maintain records of monitoring and testing as required by Table 3 (including 40 CFR Part 60, Subpart OOO).
	6. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.
	7. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates of the approved EU and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.
	8. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMPs for the EUs approved herein on-site.
Facility- wide	9. Maintain records of Facility operations such that information may be reported as required for compliance with 310 CMR 7.12.
	10. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	11. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

**Table 4 Key:**

EU# = Emission Unit Number

EUs = emission units

SOMPs = Standard Operating and Maintenance Procedures

MassDEP = Massachusetts Department of Environmental Protection

USEPA = United States Environmental Protection Agency

Table 5	
EU#	Reporting Requirements
Facility-wide	1. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a “Responsible Official” as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	2. The Permittee shall notify the Northeast Regional Office of MassDEP, BWP Permit Chief by email at <a href="mailto:nero.air@state.ma.us">nero.air@state.ma.us</a> or fax 978-694-3499 as soon as possible, but no later than one (1) business day after discovery of any exceedance(s) of Table 2 requirement(s). A written report shall be submitted to the BWP Permit Chief within three (3) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	3. The Permittee shall submit any required reports for 40 CFR Part 60, Subpart OOO to USEPA Region I.
	4. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30 days from MassDEP’s request.
	5. The Permittee shall submit to MassDEP for approval a stack emission pretest protocol, at least 60 days prior to emission testing, for any emission compliance testing as defined in Table 3 Monitoring and Testing Requirements.
	6. The Permittee shall submit to MassDEP a final stack emission test results report, within 45 days after emission testing, for any emission testing as defined in Table 3 Monitoring and Testing Requirements.
	7. The Permittee shall submit a Source Registration/Emission Statement form to MassDEP in accordance with the requirements of 310 CMR 7.12.

**Table 5 Key:**

EU# = Emission Unit Number  
CMR = Code of Massachusetts Regulations  
USEPA = United States Environmental Protection Agency  
MassDEP = Massachusetts Department of Environmental Protection  
BWP = Bureau of Waste Prevention

### **3. SPECIAL TERMS AND CONDITIONS**

The Permittee is subject to, and shall comply with, the following special terms and conditions:

- A. The Permittee shall comply with the Special Terms and Conditions as contained in Table 6 below:

<b>Table 6</b>	
<b>EU#</b>	<b>Special Terms and Conditions</b>
EU-CRUSH	1. The Permittee shall restrict its hours of operation for EU-CRUSH to between 7:00 am and 5:00 pm, Monday through Friday, except that “commercial operations” from 4:00 pm to 5:00 pm shall consist of only on-site production and shall exclude deliveries of any product from the Facility. Records of the actual operating hours shall be maintained on-site for a minimum of five years and shall be made available for review by MassDEP personnel upon request.
	2. The Permittee shall follow the Standard Operating and Maintenance Procedures (SOMPs) for the subject emission unit so as to maintain its efficient operation and minimize emissions of PM <sub>10</sub> and PM <sub>2.5</sub> .
	3. The Permittee shall maintain noise levels below the limits described in the regulations of the MassDEP, Community Sound Level Criteria, as described in 310 CMR 7.10 and DAQC Policy 90-001, dated February 1, 1990.
	4. The Permittee shall sweep Russell Street and paved facility roads as conditions warrant. The Permittee shall use a water truck on Russell Street and the haul roads to suppress dust during trucking operations, as conditions warrant. The Permittee shall use an appropriate chemical dust suppressant such as calcium chloride spray during the winter months when temperatures prohibit use of water, as conditions warrant.
	5. The Permittee shall take whatever measures are feasible to minimize any nuisance conditions caused by the wind erosion of fines from the stockpiles of rocks, stones, and sand, as necessary.
	6. The Permittee shall comply with 310 CMR 7.01(1), 310 CMR 7.09(1), and 310 CMR 7.10(1) at all times. These Air Pollution Control Regulations are enforceable by any police department, fire department, board of health officials, or building inspector or their designee acting within their jurisdictional area via 310 CMR 7.52.
	7. The Permittee shall activate the wet dust suppression system prior to start-up of the subject EU and shall continue to operate said system while the EU is operating. Spray bars/nozzles shall be located at crusher inlets and discharges, screen discharges, and belt conveyor transfer points. The overall control efficiency of process fugitive particulate matter shall be a minimum of 94 percent based on information submitted in the Application. The wet dust suppression system shall be operated such that fugitive emissions remain at or below the opacity limits stated in Table 2 of this Plan Approval.
	8. The Permittee shall visually inspect each wet dust suppression system during daily start-up of EU-CRUSH, note any deficiencies/malfunctions, and take immediate corrective actions, should such be necessary to ensure compliance with Special Condition 7 above. These records shall be maintained on-site for a minimum of five years and shall be made available for review by MassDEP personnel upon request.
	9. The Permittee shall have readily accessible on-site, at all times, spare parts for the wet dust suppression systems, as recommended by manufacturer specifications.



Table 6	
EU#	Special Terms and Conditions
EU-CRUSH	10. No person shall cause, suffer, allow, or permit the removal, alteration or shall otherwise render inoperative any air pollution control equipment or equipment used to monitor emissions which has been installed as a requirement of Regulation 310 CMR 7.00, other than for reasonable maintenance periods or unexpected and unavoidable failure of the equipment, provided that MassDEP has been notified of such failure, or in accordance with specific written approval by MassDEP.
	11. The Permittee shall perform routine maintenance on EU-CRUSH as described in the Application. Excessive visible dust emissions that occur from EU-CRUSH, vehicular site traffic on haul roadways, or any other portion of the nonmetallic mineral processing plant shall be corrected as soon as possible, in no case later than before the start of the next business day.
	12. The Permittee shall operate EU-CRUSH in conformance with its SOMP.
	13. The Permittee shall comply with the Federal New Source Performance Standards (NSPS) for new stationary or portable sources for nonmetallic mineral processing plants, 40 CFR Part 60, Subpart OOO. The applicable test method and procedures to be used during compliance testing are stated in 40 CFR Part 60, Appendix A, Test Method 9. This compliance demonstration testing must be performed within 60 days after achieving the maximum production rate, but no later than within 180 days of new equipment start-up. Since the MassDEP has not accepted delegation for Subpart OOO, you are advised to consult with EPA New England, Region 1, 5 Post Office Square, Suite 100, Boston, MA 02109-3912, phone (617) 918-1111. Other applicable requirements may include notification, record keeping, and reporting requirements.
	14. The Permittee shall maintain speed limit signs on the roadways and take appropriate action in accordance with Best Management Practices when vehicles appear to be operating above the 10 miles per hour limit.
	15. Plan Approvals under Transmittal No. 126834, dated June 10, 1997, and Transmittal No. 137761, dated April 16, 1998, are formally terminated as of the date of this Plan Approval.
Facility-wide	16. The Permittee shall maintain an Environmental Logbook, or similar record keeping system, which shall document all actions associated with environmental issues and overall emissions changes at the Facility. The Permittee shall record information such as the result of federal, state, or local environmental inspections, and maintenance or corrective actions related to manufacturing. This Logbook, or similar, shall be made available to MassDEP personnel upon request.
	17. That a copy of this Approval letter shall be maintained on-site at the office of this Facility.

**Table 6 Key:**  
EU# = Emission Unit Number

## **6. GENERAL CONDITIONS**

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.
- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and/or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.
- F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.

- J. The Permittee shall conduct emission testing, if requested by MassDEP, in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13. If required, a pretest protocol report shall be submitted to MassDEP at least 30 days prior to emission testing and the final test results report shall be submitted within 45 days after emission testing.
- K. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

## **7. MASSACHUSETTS ENVIRONMENTAL POLICY ACT**

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain “Fail-Safe Provisions,” which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

## **8. APPEAL PROCESS**

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts  
Department of Environmental Protection  
P.O. Box 4062  
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Should you have any questions concerning this Plan Approval, please contact Mr. Mun Wong by telephone at 978-694-3286, or in writing at the letterhead address.

Sincerely,

This final document copy is being provided to you electronically by the  
Department of Environmental Protection. A signed copy of this document  
is on file at the DEP office listed on the letterhead.

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Mun S. Wong  
Environmental Engineer

This final document copy is being provided to you electronically by the  
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is on file at the DEP office listed on the letterhead.

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James E. Belsky  
Permit Chief  
Bureau of Waste Prevention